West Virginia Department of Environmental Protection
Division of Air Quality

Fact Sheet

For Final Renewal Permitting Action Under 45CSR30 and Title V of the Clean Air Act

Permit Number: **R30-03300011-2011**
Application Received: **October 25, 2010**
Plant Identification Number: **03300011**
Permittee: **Dominion Transmission, Inc.**
Facility Name: **Wilsonburg Compressor Station**
Mailing Address: **445 West Main Street, Clarksburg, WV 26301**

Revised: N/A

Physical Location:	Wilsonburg, Harrison County, West Virginia
UTM Coordinates:	549.9 km Easting • 4348.7 km Northing • Zone 17
Directions:	From the intersection of Rt. 50 and SR98 near Clarksburg, go west on Rt. 50 for 1.3 miles to intersection. Turn right onto Paleo Road and travel 100 feet to gravel road on the right. Go through the gate and follow gravel road to the station.

Facility Description

Wilsonburg Compressor Station is a natural gas facility covered by Standard Industrial Classification (SIC) Code 4922. The station has the potential to operate seven (7) days per week, twenty-four (24) hours per day. The station consists of a total of three (3) natural gas fired reciprocating engines, two (2) emergency generators, one (1) dehydration unit with flare, and seven (7) storage tanks of various sizes.

Emissions Summary

Plantwide Emissions Summary [Tons per Year]

Regulated Pollutants	Potential Emissions*	2010 Actual Emissions
Carbon Monoxide (CO)	68.4	32.81
Nitrogen Oxides (NO_X)	260.71	176.50
Particulate Matter (PM_{10})	0.60	0.29
Total Particulate Matter (TSP)	0.60	0.29
Sulfur Dioxide (SO_2)	0.05	0.02
Volatile Organic Compounds (VOC)	140.59	170.21**

PM_{10} is a component of TSP.

Hazardous Air Pollutants	Potential Emissions	2010 Actual Emissions
Total Miscellaneous HAPs	6.91***	16.72

Some of the above HAPs may be counted as PM or VOCs.

* *The Potential Emissions include the new emergency generators and the replacement of the dehydration unit.*

** *The actual VOC PTEs are a result of a new gas sample that was taken and used in the GLYCalc program. The resulting emissions were higher than the previously estimated emissions due to a change in the gas composition.*

*** *The HAP Potential Emissions shown take into account the replacement of the dehydration unit. Therefore the 2010 actual emissions are higher than the potential emissions. The potential HAP emissions that would correspond to the 2010 actual emissions without consideration of the dehydration replacement would be 19.40 tons/yr.*

Title V Program Applicability Basis

This facility has the potential to emit 260.71 tons of NOx and 140.59 tons of VOC. Due to this facility's potential to emit over 100 tons per year of criteria pollutant, Dominion Transmission, Inc. is required to have an operating permit pursuant to Title V of the Federal Clean Air Act as amended and 45CSR30.

Legal and Factual Basis for Permit Conditions

The State and Federally-enforceable conditions of the Title V Operating Permits are based upon the requirements of the State of West Virginia Operating Permit Rule 45CSR30 for the purposes of Title V of the Federal Clean Air Act and the underlying applicable requirements in other state and federal rules.

This facility has been found to be subject to the following applicable rules:

Federal and State:

45CSR2	To Prevent And Control Particulate Air Pollution From Combustion Of Fuel In Indirect Heat Exchangers
45CSR6	Open burning prohibited.
45CSR10	Control of Sulfur Dioxide Emissions from Indirect Heat Exchangers

45CSR11	Standby plans for emergency episodes.
45CSR13	Permits For Construction, Modification, Relocation And Operation Of Stationary Sources Of Air Pollutants, Notification Requirements, Administrative Updates, Temporary Permits, General Permits, And Procedures For Evaluation
45CSR16	Standards of Performance for New Stationary Sources Pursuant to 40 CFR Part 60
WV Code § 22-5-4 (a) (14)	The Secretary can request any pertinent information such as annual emission inventory reporting.
45CSR30	Operating permit requirement.
40 C.F.R. 60, Subpart JJJJ	Standards of Performance for Stationary Spark Ignition Internal Combustion Engines
40 C.F.R. Part 61	Asbestos inspection and removal
40 C.F.R. Part 63, Subpart HH	National Emission Standards for Hazardous Air Pollutants From Oil and Natural Gas Production Facilities
40 C.F.R. Part 63, Subpart ZZZZ	National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines
40 C.F.R. Part 64	Compliance Assurance Monitoring
40 C.F.R. Part 82, Subpart F	Ozone depleting substances
State Only:	
45CSR4	No objectionable odors.
45CSR17	To Prevent And Control Particulate Matter Air Pollution From Materials Handling, Preparation, Storage And Other Sources Of Fugitive Particulate Matter

Each State and Federally-enforceable condition of the Title V Operating Permit references the specific relevant requirements of 45CSR30 or the applicable requirement upon which it is based. Any condition of the Title V permit that is enforceable by the State but is not Federally-enforceable is identified in the Title V permit as such.

The Secretary's authority to require standards under 40 C.F.R. Part 60 (NSPS), 40 C.F.R. Part 61 (NESHAPs), and 40 C.F.R. Part 63 (NESHAPs MACT) is provided in West Virginia Code §§ 22-5-1 *et seq.*, 45CSR16, 45CSR34 and 45CSR30.

Active Permits/Consent Orders

Permit or Consent Order Number	Date of Issuance	Permit Determinations or Amendments That Affect the Permit *(if any)*
R13-2856A	July 7, 2011	

Conditions from this facility's Rule 13 permit(s) governing construction-related specifications and timing requirements will not be included in the Title V Operating Permit but will remain independently enforceable under the applicable Rule 13 permit(s). All other conditions from this facility's Rule 13 permit(s) governing the source's operation and compliance have been incorporated into this Title V permit in accordance with the "General Requirement Comparison Table B," which may be downloaded from DAQ's website.

Determinations and Justifications

This is a renewal of the Title V permit which was issued on July 10, 2006 and modified on March 16, 2011. Changes to the most recent version of the Title V Permit consist of the following:

This renewal permit includes a Significant Modification (SM02) application Received on May 15, 2011. The significant modification incorporates the requirements of Permit R13-2856A for the construction of a new dehydration unit, reboiler and flare. The existing dehydration unit, reboiler and flare are to be replaced and removed.

1) **Emission Units Table Section 1.1**
   - The table was updated to include the dehydration unit, reboiler and flare replacement

2) **Title V Boilerplate changes**

   - **Condition 2.1.4.** – This condition has been added and states: *Unless otherwise specified in a permit condition or underlying rule or regulation, all references to a "rolling yearly total" shall mean the sum of the monthly data, values or parameters being measured, monitored, or recorded, at any given time for the previous twelve (12) consecutive calendar months.*

   - **Condition 3.1.1. and 3.1.2**. – These conditions were revised because the language in 45CSR§§6-3.1. & 3.2. was revised.

   - **Condition 3.1.3.** The citation of authority was changed because 45CSR15 was repealed and 40 CFR 61 is now incorporated into 45CSR34. Also expanded 40 C.F.R. 61 citation to 40 C.F.R. §61.145(b). Slight language revision.

   - **Condition 3.3.1. –** Subsection "d" was added to this condition. Also section 14 of WV Code §§22-5-4 (a) was added in the citation of authority.

   - **Condition 3.5.3. and 3.5.5.** These conditions were revised to require electronic submittal of the annual certification to USEPA. The certification shall now only be submitted to the USEPA by e-mail.

3) **Section 5 –** The Rule 13 construction permit, R13-2856 was modified to for the replacement of the Glycol Dehydration Unit, rated at 13.5 million standard cubic feet per day (mmscfd), with a new Cameron Glycol Dehydration Unit, also rated at 13.5 mmscfd. Emissions from the new regenerator still vent (DEHY02) are routed to a Cameron Model SHV 2.5 flare (F2), rated at 10 MMBtu/hr, for VOC, HAP and odor control. The new natural gas-fired reboiler (RBR02) associated with the unit is rated at 1.104 MMBtu/hr. The existing dehydration unit still (003-01), reboiler (004-01), and flare (DEHY) are to be taken out of service. The requirements from the Rule 13 modified permit R13-2856A have been incorporated into Section 5 of the Title V permit. The existing Rule 6 and Rule 10 flare requirements have been renumbered and updated as appropriate.

   - **Condition 5.1.3. –** Condition 5.1.3.of the Permit R13-2856A deals with potential HAP emissions and refers to "Section 4.1.2." of the permit. However, 4.1.2. is a requirement pertaining to 40 CFR 60, Subpart JJJJ and 4.1.1. pertains to HAP emissions and minor source of HAP status. Therefore in condition 5.1.3. of the Title V permit, "Section 4.1.2." has been changed to "Section 6.1.1" which corresponds to Section 4.1.1. of permit R13-2856A.

   - **Condition 5.1.4.b. -** The Rule 6 opacity requirement of 20 % has been streamlined with the no visible emissions requirement of R13-2856A. An exception is provided in R13-2856A that allows visible emission for periods not to exceed a total of 5 minutes during any 2 consecutive hours. Therefore "*During the exception period when visible emissions are allowed, the visible emissions shall not exceed 20% opacity except for periods of start-up as outlined in 45CSR§6-4.4. (i.e., less than forty (40%) percent opacity, for a period or periods aggregating no more than eight (8) minutes per start-up)"* has been added in order to meet the Rule 6 opacity requirement.

- **Condition 5.1.6. –** The particulate matter limit from Rule 6 was updated to reflect the PM limit for the new dehydration unit.

- **Condition 5.2.6. –** The language in this condition has been modified to be consistent with other natural gas compressor station permits.

- **Condition 5.3.3. –** The language in this condition is primarily that of the R13-2856A requirement. The similar language in the existing Title V permit (condition 5.3.1.) has been merged with the R13 permit requirement. The merged language established a frequency for testing and includes language for utilizing other test methods if approved by the DAQ.

- **Condition 5.3.4. –** Compliance with this condition will be streamlined by demonstrating compliance with the monitoring specified within 5.2.6. and the testing provision of 5.3.3.

- **Condition 5.4.5. –** The language from the existing Title V permit condition 5.4.1. has been merged with the R13-2856A language. The merged language include more details of the information to be monitored and recorded.

- **Condition 5.5.1. –** Language addressing the submission of a test protocol if alternative test methods are proposed has been added to the R13-2856A language.

- **40 CFR 63, Subpart HH Area Source Requirements –** The facility is a minor source of HAPs and has benzene emissions less than 1 ton per year. The GACT requirements of 40 CFR63 Subpart HH and associated requirements are included in permit conditions 5.1.11. through 5.1.14., 5.2.6. and 5.3.4.

4) Section 7.0 – This section of the permit has been added for the reciprocating engines 001-01, 001-02 and 001-03 and incorporates the requirements of 40 CFR 63, Subpart ZZZZ applicable to the engines.

- **40 CFR 63, Subpart ZZZZ RICE MACT Applicability –** The three engines, a Clark HMA-8 (001-01), Ajax DPC-360 (001-02) and Ajax DPC-800 (001-03), are existing spark-ignition (SI) two-stroke lean burn (2SLB) Reciprocating Engines/Integral Compressors that combust pipeline quality natural gas and are rated at 350 HP, 360 HP, and 800 HP respectively. These engines meet the definition of reciprocating internal combustion engines (RICE) according to 40 CFR § 63.6685(a):

- Since, this facility is not a major source of HAPS, the 40 CFR 63, Subpart ZZZZ area source requirements apply. The horsepower range for the 001-01 and 001-02 engines fit into the less than 500 HP category as established by the regulation. The horsepower range for the 001-03 engine fits into the greater than 500 HP category as established by the regulation

- The three (2SLB) engines are subject to the maintenance requirements (every 4,320 hours change oil/filter, inspect spark plugs, and inspect hoses/belts).

5) 40 CFR Part 64 – ***Compliance Assurance Monitoring (CAM)***

With the replacement of the existing dehydration unit (DEHY01) with a new dehydration unit (DEHY02), the emission unit DEHY02 is a pollutant-specific emissions unit (PSEU) for the pollutant VOC. The PSEU meets all of the applicability criteria in 40 CFR §§64.2(a)(1)-(3). That is, the PSEU is subject to an emission limit for VOC (R13-2856A, 5.1.2.); uses a control device (flare F2) to achieve compliance with the VOC emission limit; and has potential pre-control device emissions of VOC greater than 100 tpy. Furthermore, the PSEU does not meet any of the exemptions given under 40 CFR §64.2(b) for VOC.

Condition 5.1.4.c. of permit R13-2856A requires operation of the flare (Control Device ID# F2) with a flame present at all times whenever emissions may be vented to the flame. In order to demonstrate compliance with this requirement, the Rule 13 permit condition 5.2.1. requires monitoring of the presence or absence of a flare pilot flame using a thermocouple or other equivalent device. Therefore, continuous monitoring of the detector signal that indicates the presence of the pilot flame will provide reasonable assurance of ongoing compliance with the VOC limit. Conditions 5.2.1., 5.2.7. through 5.2.12., 5.4.11., 5.4.12., and 5.5.6. contain the CAM requirements.

Monitoring per the CAM Plan will be as follows:

		PSEU DEHY02
		Indicator No. 1
I.	**Indicator**	Flare (F2) operation
	Monitoring Approach	Continuous monitoring of the pilot flame using a computerized data acquisition, feedback, and control system to ensure the flare operates at all times the dehydration is in operation.
II	**Indicator Range**	Indicator provides data regarding presence or absence of flame.
	A. QIP threshold	The permittee has chosen not to propose a threshold at this time since it is not required for this permitting action by 40 C.F.R. §64.8(a). Although the threshold is not required, the language for a QIP as it relates to other applicable requirements is set forth as permit condition 5.2.11.
III	**Performance Criteria** **A. Data Representa-tiveness**	The detector will be installed, as specified by the manufacturer, to sight the most stable part of the flare flame at all firing rates. The installation will be performed by a trained, experienced representative of the manufacturer.
	B. Verification of Operational Status	All manufacturer's recommendations regarding periodic testing/checks for the proper installation and operations of the flame detecting device will be followed.
	C. QA/QC Practices and Criteria	For the device that detects the presence of a flame; calibration, maintenance, and operation will be conducted in accordance with manufacturer's specifications.
	D. Monitoring frequency	Continuous
	E. Data Collection Procedure	Continuous, alarmed signal is sent to the control panel and recorded in *Mhealth*, Dominion's computerized data acquisition, monitoring, and statistical analysis system.
	F. Averaging Period	There is no averaging period since the flare pilot flame is either present or absent.

The emissions of HAPs from DEHY02 are not subject to 40 CFR Part 64 because they are subject to 40 CFR Part 63, Subpart HH. Being subject to Subpart HH meets the exemption criterion at 40 CFR §64.2(b)(1)(i) for the affected HAPs. Table 1 of Subpart HH lists the specific HAPs that are subject to Subpart HH. All of the HAPs that have limits in condition 5.1.2. of permit R13-2792 (Title V condition 5.1.2.) are listed in Table 1 of Subpart HH. Therefore, all of the HAPs with limits in Title V condition 5.1.2., which are emitted from DEHY02, are not subject to 40 CFR Part 64.

Non-Applicability Determinations

The following requirements have been determined not to be applicable to the subject facility due to the following:

Greenhouse Gas Permitting - This is a renewal Title V permit and there have been no modifications that would have triggered a PSD permit. Therefore, there are no applicable GHG requirements.

Request for Variances or Alternatives

"None."

Insignificant Activities

Insignificant emission unit(s) and activities are identified in the Title V application.

Comment Period

Beginning Date:	September 10, 2011
Ending Date:	October 10, 2011

All written comments should be addressed to the following individual and office:

Frederick Tipane
Title V Permit Writer
West Virginia Department of Environmental Protection
Division of Air Quality
601 57th Street SE
Charleston, WV 25304

Procedure for Requesting Public Hearing

During the public comment period, any interested person may submit written comments on the draft permit and may request a public hearing, if no public hearing has already been scheduled. A request for public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing. The Secretary shall grant such a request for a hearing if he/she concludes that a public hearing is appropriate. Any public hearing shall be held in the general area in which the facility is located.

Point of Contact

Frederick Tipane
West Virginia Department of Environmental Protection
Division of Air Quality
601 57th Street SE
Charleston, WV 25304
Phone: 304/926-0499 ext. 1215 • Fax: 304/926-0478

Response to Comments (Statement of Basis)

Comments were received by Dominion Transmission, Inc. As a result of such comments, the following revisions have been made to the draft permit:

- Condition 5.2.12. has been revised in order to more accurately reflect the automatic controls used for the operation of the flare. The underlined text below has been added to the language of 5.2.12. This condition now reads:

  "The dehydration unit is designed to "shutdown" if the absence of a flame is detected <u>after automatic reignition is unsuccessful</u>. Therefore an excursion will occur if the dehydration unit is not shutdown when the absence of a flame is detected <u>after unsuccessful reignition</u>."

- Conditions 5.5.1. has been revised in order to eliminate an unintended requirement to submit two reports for one sampling event and to clarify the language for the submittal of a test protocol. The following sentence has been added to this permit condition:

  The testing results of the required 3rd year testing in section 5.3.3. shall be submitted as outlined in 5.5.5 below. A test protocol will not be required for the 3rd year testing unless alternative methods are proposed.

- Conditions 5.5.5. has been revised for clarification of the requirement and to compliment the changes in permit condition 5.5.1. discussed above. The underlined text below has been added to the language in the first sentence of condition 5.5.5. The first sentence was amended to read:

  The permittee shall submit by March 31st of the following year, an emission summary for the dehydration unit (DEHY02), which incorporates the results of the wet gas testing conducted during the 3rd year of the permit term as required by 5.3.3.